

ET12K(X) BID SPECIFICATIONS



GENERAL DESCRIPTION

The crane shall be a pedestal mounted service crane that operates on 12 volt D.C. battery power. It shall have a single line capacity of 1750 lbs. and a 3500 lb. capacity with a 2 part line. The maximum overturning moment rating is 12,000 ft. lbs. Crane shall meet OSHA 1910.180 requirements and ANSI/ASME B30.5 safety standards.

PAINT SPECIFICATIONS

The crane shall be painted with Imron® 333M/42P High Solids Polyurethane Enamel (Venturo Gray).

TELESCOPIC BOOM

The boom shall telescope to provide a horizontal reach range of 7 ft. to 15 ft. using a manual extension (K) or power extension (KX) with a 4 ft. stroke from 7 to 11 ft. and a 4 ft. manual extension section to 15 ft.

The power extension boom shall have bearing pads on all sides made from UHMW polyethylene to provide low friction and wear rate without benefit of other lubrication.

POWER EXTENSION - ET12KX MODEL

The hydraulic extension cylinder shall be mounted on top of the boom for ease of maintenance and have the capability of extending the boom under maximum rated load at any operating position.

- ▲ The boom shall be extended by a double-acting hydraulic cylinder with an integral counterbalance valve to prevent the boom from retracting should a loss of hydraulic pressure occur.
- ▲ The extension cylinder rod shall have a minimum diameter of 1 3/8" and shall be chrome plated.

BOOM ELEVATION

The boom elevation angle range shall extend from 5 degrees below horizontal to 75 degrees above horizontal.

The boom shall be elevated by a double acting hydraulic cylinder with integral counter balance valve to prevent boom from lowering should a loss of hydraulic pressure occur.

Counter balance valve integrated into body of cylinder-plumbed externally is not acceptable.



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SHEAVES

The boom end load hoisting sheaves shall be made of polymer composite material and have a pitch diameter of at least 18 times the 1/4 wire tope diameter per ANSI B30.5. Sheave bearings shall be made of maintenance free composite material.

CAPACITY CHARTS

Easy to read Capacity Charts with indicator arrows showing boom angles and capacities for various reaches shall be located on each side of the boom.

HYDRAULIC POWER UNIT

An electric hydraulic power unit shall include a pressure relief valve and supply fluid to a valve manifold controlling boom elevation, rotation and extension (ET12KX only) functions. The hydraulic fluid used shall be DEXRON Automatic Transmission Fluid.

WINCH POWER UNIT

The winch power unit shall be electric powered with a cam actuated cone brake that release in either direction.

WINCH PERFORMANCE

The nominal winch performance shall be as follows.

Load (lbs.)	Part Line	Lifting Speed (ft./min.)
0	1	17
1000	1	15
1725	1	13
2000	2	10
3500	2	7

WINCH DRUM

Winch drum first layer wire rope pitch diameter shall be at least 18 times the 1/4 wire rope diameter per ANSI B30.5.

Winch drum shall have flanges and guards that prevent the wire rope from getting off of the drum. The winch drum shall be at least 3-3/4 in. wide between flanges. The winch drum shall have sufficient capacity to allow up to 100 ft. of 1/4 wire rope to be used.

WIRE ROPE

The standard 7 x 19 1/4 galvanized aircraft wire rope shall be 65 ft. long and fitted with

a 1-1/4 ton carbon steel eye, hook with safety latch.

The wire rope shall have a minimum breaking strength of 7000 lbs. or 3-1/2 times the 2000 lb. rated single line capacity per ANSI B30.5. The wire rope shall be outside of the boom so that the wire rope and winch drum are visible to the operator.

SNATCH BLOCK

The crane shall be supplied with a snatch block that will allow quick conversion from single to two part line operation. The snatch block shall be provided with a 2-1/2 ton carbon steel swivel hook with safety latch. The sheave shall be made of polymer composite material and have a pitch diameter of at least 16 times the 1/4 wire rope diameter per ANSI B30.5. Sheave bearings shall be made of maintenance free composite material.

OVERHAUL WEIGHT

The crane shall be provided with a 6 lb. overhaul weight for use with single line operation, that can be easily removed for two part line operation.

ROTATION

The electric/hydraulic powered rotation system shall have continuous 360 degree rotation.

The rotation drive line shall be self-locking.

The crane housing shall rotate on a sealed turntable style bearing.

REMOTE CONTROL

The crane shall have a remote control pendant with environmentally sealed switches, a switch bat guard, a hook for hanging the pendant, and a 25 ft. cord. The cord shall have a plug so that it can be unplugged from the crane when not in use. The pendant shall be convenient to hold and operate with one hand.

ELECTRICAL CONTROL SYSTEM

The crane controls shall have a priority system so that the operator can perform only one major function at a time to limit current draw on the battery during heavy lifting.

The priority of major functions shall be as follows: 1. Winch shall take priority over all other functions. 2. Winch down shall be able to be operated with any other single function. 3. Hydraulic functions (rotation right, rotation left, boom up, boom down, boom out and boom in) shall be designed to function one at a time.

OVERLOAD SENSING SYSTEM

The crane shall have an overload sensing system that shuts off the winch up, boom

down and boom out functions to prevent excessive overloads when the crane capacity is exceeded. The winch down, boom up, boom in and rotation function shall remain in operation to get the crane out of the overload condition.

ANTI-TWO BLOCKING

An anti-two-blocking feature shall be available to prevent damage to the wire rope by disabling the winch up, boom down and boom out functions (three functions shut down.)

HYDRAULIC DIRECTIONAL CONTROL VALVES

The solenoid operated directional control valves are equipped with push button manual override to maintain rotation, elevation and extension function in case of electrical malfunction.

ELECTRICAL INSTALLATION

For electrical installation a #2 x 25 ft. battery cable shall be provided. A #2 x 4 ft. battery cable fixed to the crane that can be routed either through the side or bottom of the crane base shall also be provided.

A master disconnect switch shall also be provided.

CRANE BASE

The crane base shall be 14 in. square and provided with 4 holes for 5/8 " diameter grade 8 bolts.

WARRANTY

The manufacturer shall warranty the crane for one year from the date of original installation.

Specifications Subject to Change Without Notice.



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